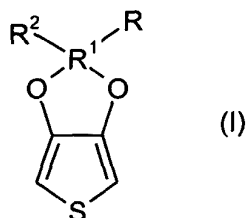


WHAT IS CLAIMED IS:

1. A process for preparing polythiophenes comprising
(1) reacting

(a) one or more thiophenes of the general formula (I)

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wherein R¹ is an unsubstituted or substituted alkylene or an alkenylene radical having from 1 to 10 carbon atoms, and

- 10 R and R², independently of one another, are hydrogen, a linear or branched alkyl radical having from 1 to 20 carbon atoms, OH, O-CH₂-CH₂-CH₂-SO₃H or O-alkyl having 1-18 carbon atoms,

(b) at least one compound containing one or more sulfonic acid groups,

- 15 (c) at least one oxidant,

(d) at least one phase-transfer catalyst, and

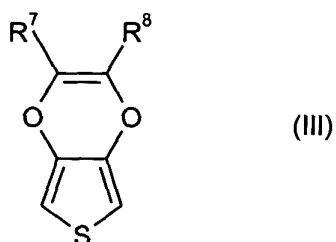
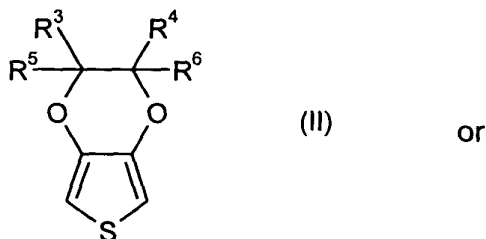
(e) optionally one or more catalysts, other than the at least one phase-transfer catalyst (d) with

(f) at least one anhydrous or low-water-content solvent at

- 20 a temperature ranging from 0 to about 150°C, thereby forming a product, and

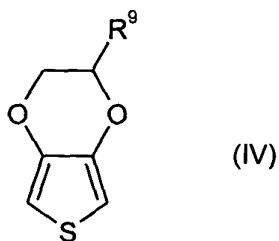
(2) subsequently working up the product.

2. The process according to Claim 1, wherein the thiophene of the formula (I) is a thiophene of the general formula (II) or (III)



5 wherein R^3 , R^4 , R^5 , R^6 , R^7 and R^8 are hydrogen atoms, alkyl groups having from 1 to 20 carbon atoms, a hydroxymethyl groups, or alkoxy-methyl groups having from 1 to 20 carbon atoms which are unsubstituted or substituted by sulfonic acid groups.

3. The process according to Claim 1, wherein the thiophene of
10 the formula (I) is a thiophene of the formula (IV)



15 wherein R^9 is hydrogen or an alkyl radical having from 1 to 20 carbon atoms.

4. The process according to Claim 1, wherein the compound containing one or more sulfonic acid groups is at least one compound selected from the group consisting of polystyrenesulfonic acids and

[illegible]

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7. The process according to Claim 1, wherein the solvents are lower alcohols having from 1 to 8 carbon atoms.

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9. The process according to Claim 1, wherein the process is carried out by reacting:

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(b) from about 0.9 to about 5.0 mole equivalents of an oxidant, per mole of thiophenes.

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(d) from 0 to about 10 mol% of a catalyst, other than the phase-transfer catalyst, based on thiophene,

wherein the ratio of the thiophenes and solvent is from about 0.001 to about 0.1:1.

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10. A polythiophene obtained with the process of Claim 1, wherein the polythiophene is a solid, a dispersion or a solution.

11. The polythiophene of Claim 10, wherein the polythiophene is a conductive coating or an anti-static coating.

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99